Product Environmental Report

Apple Watch Ultra 2 — Carbon Neutral

Date introduced
September 12, 2023

Carbon neutral

30% recycled or renewable content[1]

100% of manufacturing electricity sourced from clean energy[2]

100% of Apple suppliers manufacturing parts and components for Apple Watch Ultra 2, Alpine Loop, and Trail Loop have committed to Apple's Supplier Clean Energy Program

50% or more non-air shipping[3]

Smarter chemistry[4]

- Arsenic-free display glass
- Mercury-free
- Brominated flame retardant–free
- PVC-free
- Beryllium-free
- Meets European REACH regulation on nickel

Longevity

Apple Watch Ultra 2 is made with durable materials, certified to water resistance 100 meters under ISO 22810:2010,[5] is tested to the relevant aspects of MIL-STD 810H,[6] and is rated IP6X dust resistant.[5]

Responsible packaging

100% fiber-based, due to our work to eliminate plastic in packaging[7]

100% recycled or responsibly sourced wood fibers

Recovery

Return your device through Apple Trade In, and we'll give it a new life or recycle it for free.

Responsible manufacturing

Apple Supplier Code of Conduct sets strict standards for the protection of people in our supply chain and the planet.

Apple Watch Ultra 2 paired with any new Alpine Loop or Trail Loop is carbon neutral

This report includes data current as of product launch. Product evaluations are based on U.S. configuration of Apple Watch Ultra 2 paired with Alpine Loop. Product carbon footprint calculations include in-box accessories as well as packaging.

Our carbon neutrality strategy for Apple Watch Ultra 2 paired with Alpine or Trail Loop

Our goal is for Apple's manufacturing supply chain and all the products we make to be carbon neutral by 2030, reducing our total carbon emissions to no more than 9.6 million metric tons—at least a 75 percent reduction against our 2015 baseline. The only way to reach this ambitious goal is to substantially decarbonize our products.

Our rigorous strategy to decarbonize products focuses on transitioning to clean electricity, designing with recycled and renewable materials, and prioritizing lower-carbon ways of shipping products, like with ocean freight. Only after we've substantially reduced emissions will we apply carbon credits from high-quality projects to achieve carbon neutrality.

Here is our approach to drastically reduce carbon emissions from the creation and use of Apple Watch Ultra 2 paired with Alpine or Trail Loop.

How we reduced emissions

- **Transitioned to 100% clean electricity for manufacturing:** To reduce emissions from the electricity used to make products, we're working to transition our entire supply chain to 100 percent clean electricity and prioritizing energy efficiency in manufacturing. For Apple Watch Ultra 2, Alpine Loop, and Trail Loop, 100 percent of manufacturing electricity is sourced from clean energy.
- **Matched emissions from charging with 100% clean electricity:** To negate emissions from the electricity our customers use to power their Apple products, we're investing in clean energy projects around the world. We're also prioritizing energy efficiency so products use less electricity. For all carbon neutral Apple Watch options, we have matched 100 percent of expected customer product use with clean electricity.[8]
- **Increased non-air transportation:** To reduce emissions from transporting products, we're shifting from air shipping to lower-carbon modes, like ocean or rail. Across the combined weight of all carbon neutral Apple Watch products, including watches and bands, we've shipped 50 percent or more by non-air modes from our final assembly sites to their next destination, primarily regional distribution hubs.
- **Used recycled and renewable materials:** To address emissions generated by using primary materials, we're increasing the recycled content in our products, maximizing material and manufacturing efficiencies, and improving yields. And where we've not yet fully transitioned to recycled content, we're prioritizing renewable and low-carbon materials, such as aluminum smelted with hydroelectricity. Apple Watch Ultra 2 paired with Alpine or Trail Loop has more than 30 percent total recycled content by weight.

How we reached carbon neutral for Apple Watch Ultra 2 paired with Alpine and Trail Loop

To address remaining emissions, we deploy nature-based solutions, through programs like the Restore Fund, that result in high-quality carbon credits. These play an important role in addressing the climate crisis, as nature-based solutions contribute to the health of ecosystems and remove carbon from the atmosphere. We are aligned with the scientific consensus that carbon credits should only be applied after aggressive efforts to reduce emissions and increase efficiency have been implemented. Apple uses credits from projects that align with international standards such as Verra, the Climate, Community & Biodiversity (CCB) Standard, and the Forest Stewardship Council (FSC), which ensure projects are real, additional, measurable, quantified, and have systems in place to avoid double-counting and ensure permanence. Carbon credits applied are retired after the end of each fiscal year, to correspond to the remaining emissions from the total number of products sold in the prior fiscal year. Apple uses an independent third party to confirm that the correct number have been retired.

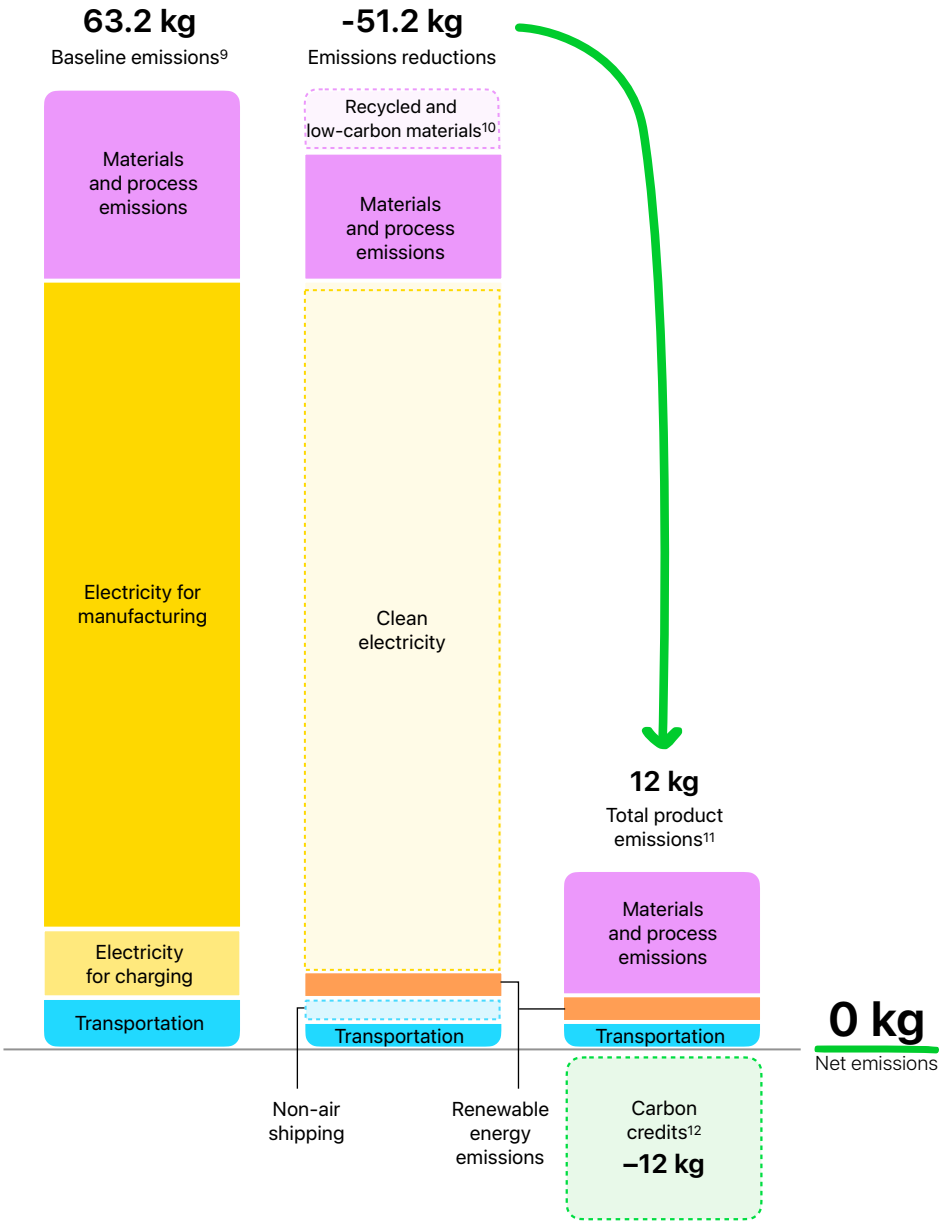
How we're demonstrating progress

We first calculate the carbon footprint of the product using a life cycle carbon analysis approach, in accordance with international standards. To help ensure our work is translating to real reductions, we consider what emissions would have been without our actions. We apply the following assumptions to create this baseline scenario:

- No use of clean electricity for manufacturing or product use, beyond what is already available on the grid (based on regional emissions factors).
- Apple's carbon intensity of key materials as of 2015. Carbon intensity of materials reflects use of recycled content and production technology.
- Apple's average mix of transportation modes (air, rail, ocean, ground) by product line across three years (fiscal years 2017 to 2019) to best capture the baseline transportation emissions of our products.

How we reached carbon neutral

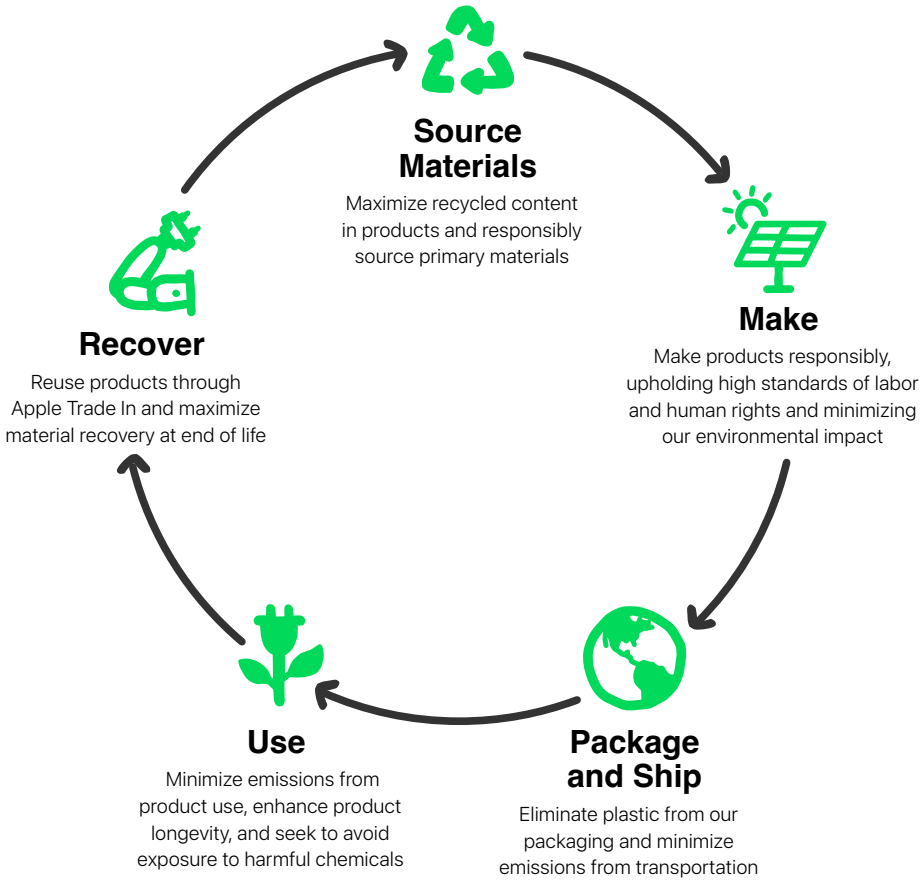
We've reduced emissions for Apple Watch Ultra 2 paired with Alpine Loop by 81 percent against our baseline.[9] This combination contains 30 percent recycled content, including 95 percent recycled titanium in the enclosure, as well as low-carbon initiatives that reduced emissions by about 6.7 percent. 100 percent of manufacturing electricity is covered by clean electricity, and we have invested in clean energy projects to match 100 percent of our customer product use with clean electricity. In our carbon footprint calculations, we also account for the emissions necessary to generate clean electricity, specifically to manufacture and maintain renewable energy infrastructure, like wind and solar farms. We've reduced transportation-related emissions with a logistics plan that uses more non-air shipping over the lifetime of all carbon neutral watches and bands. Only after these efforts do we cover residual emissions through high-quality carbon credits that are real, additional, measurable, quantified, and have systems in place to avoid double-counting and ensure permanence.



Taking responsibility for our products at every stage

We take responsibility for our products throughout their life cycles—including the materials they are made of, the people who assemble them, and how they are recycled at end of life. And we focus on the areas where we can make the biggest difference for our planet: reducing our impact on climate change, conserving important resources, and using safer materials.

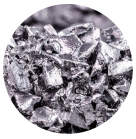
We sell millions of products. So making even small adjustments can have a meaningful impact.


Source Materials
Maximize recycled content in products and responsibly source primary materials
Make
Make products responsibly, upholding high standards of labor and human rights and minimizing our environmental impact
Package and Ship
Eliminate plastic from our packaging and minimize emissions from transportation
Use
Minimize emissions from product use, enhance product longevity, and seek to avoid exposure to harmful chemicals
Recover
Reuse products through Apple Trade In and maximize material recovery at end of life

Source Materials

Apple Watch Ultra 2 paired with Alpine or Trail Loop contains 30 percent or more recycled or renewable content.[1]

To conserve important resources, we work to reduce the material we use and aim to one day source only recycled or renewable materials for our products. And as we make this transition, we remain committed to the responsible sourcing of primary materials. We map many materials, some to the mineral source, and establish the strictest standards for smelters and refiners. Apple also requires 100 percent of identified tin, tantalum, tungsten, gold, cobalt, and lithium smelters and refiners to participate in third-party audits.[13] We're proud to be recognized as a worldwide leader in the responsible sourcing of minerals in our products. Our product designs also consider the safety of those who make, use, and recycle our products, restricting the use of hundreds of harmful substances. Our standards go beyond what's required by law to protect people and the environment.



Titanium. We use 95 percent recycled titanium in the enclosure of Apple Watch Ultra 2,[14] which provides great durability with a sleek finish. This is a first for Apple.

Plastic. The Apple Watch Ultra 2 antenna line on the housing uses up-cycled plastic water bottles that have been transformed into a stronger, high-performance material.

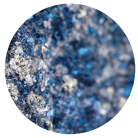
Tin. We use 100 percent recycled tin in the solder of multiple printed circuit boards.

Rare earth elements. We use 100 percent recycled rare earth elements in all magnets, representing 99 percent of the total rare earth elements in the device.

Tungsten. We use 100 percent recycled tungsten in the Taptic Engine. This represents 100 percent of the total tungsten in the device.[15]

Gold. Apple is pioneering industry-leading levels of traceability in recycled materials to build a gold supply chain of exclusively recycled content. We're now using 100 percent recycled gold in the plating of multiple printed circuit boards.

Copper. We're now using 100 percent recycled copper foil in the main logic board and—a first for Apple—100 percent copper wire in the Taptic Engine.



Cobalt. In Apple Watch Ultra 2, we use 100 percent recycled cobalt in the battery,[16] a first for Apple. This achievement is part of our April 2023 commitment to transition to 100 percent recycled cobalt in Apple-designed batteries by 2025.

Smarter chemistry

Apple Watch Ultra 2 is free of harmful substances like beryllium, brominated flame retardants, PVC, phthalates, arsenic in the display glass, and mercury.[4] And 100 percent of the materials in Apple Watch Ultra 2, Alpine Loop, and Trail Loop are covered by our Regulated Substances Specification. We go beyond what's required by aiming to understand the non-regulated substances in every part of every product—an effort that requires an industry-leading level of transparency through the entire supply chain.

Make

Apple suppliers manufacturing parts and components for Apple Watch Ultra 2, Alpine Loop, and Trail Loop have committed to Apple's Supplier Clean Energy Program, an integral part of our efforts to address climate change by transitioning suppliers to clean and renewable energy around the world. These efforts are helping to reduce product-related carbon emissions, create a more resilient supply chain, and contribute to healthier communities—while offering a model for others to follow.

The Apple Supplier Code of Conduct sets strict standards for the protection of people in our supply chain and the planet that we all share. Every year, we assess our suppliers' performance in upholding the standards required by our Code.

We work closely with our suppliers to provide safe and healthy workplaces where people are treated with dignity and respect, and to reduce suppliers' environmental impact. Our requirements apply across our supply chain and include the responsible sourcing of materials. From the strong foundation set by our Code, we go further—from helping suppliers transition to clean electricity, to providing educational opportunities for their employees, to supporting final assembly suppliers in reducing waste. For more information, see apple.com/supplier-responsibility.

Greener chemicals

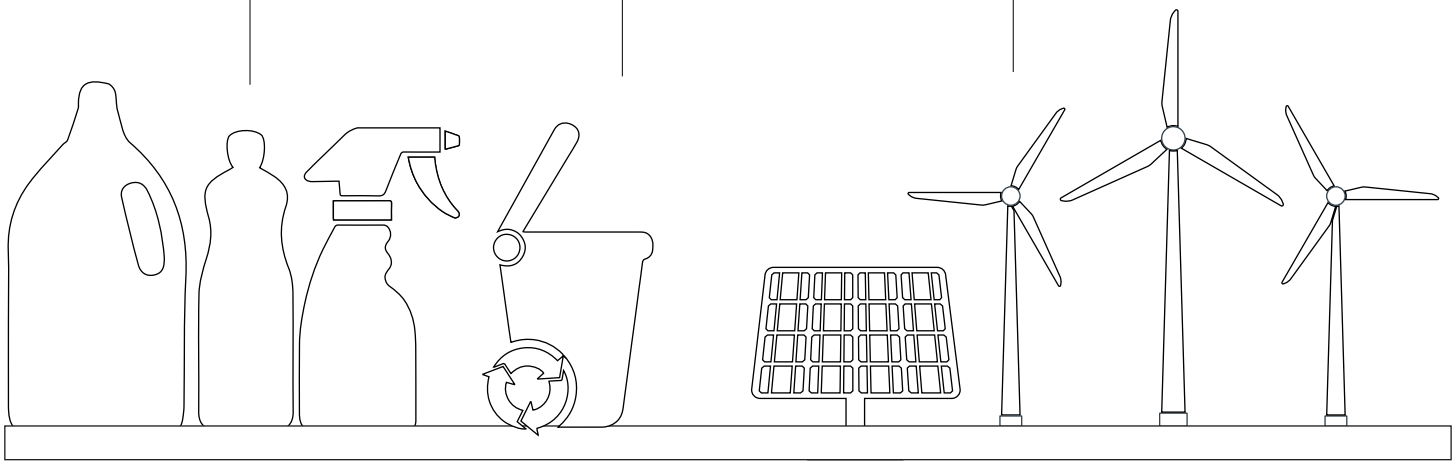
All established Apple Watch Ultra 2, Alpine Loop, and Trail Loop final assembly supplier sites use safer cleaners and degreasers in their manufacturing processes, as determined by methodologies like the GreenScreen® assessment.[17]

Zero Waste to Landfill

No established Apple Watch Ultra 2, Alpine Loop, or Trail Loop final assembly supplier sites generate any waste sent to landfill.[18]

Supplier energy use

100 percent of manufacturing electricity for Apple Watch Ultra 2, Alpine Loop, and Trail Loop is sourced from clean electricity.



Package and Ship

Apple Watch Ultra 2, Alpine Loop, and Trail Loop packaging is 100 percent fiber-based and contains no plastic except for inks, coatings, and adhesives, the first milestone towards our commitment to have plastic-free packaging by 2025.

We are working to improve our packaging across all products, including eliminating plastics, increasing recycled content, and reducing the volume of our packaging. Our packaging for Apple Watch Ultra 2 paired with Alpine or Trail Loop contains 38 percent recycled content, and we have protected or created enough responsibly managed forests to cover all the new wood fiber we use in our packaging.[19] This ensures working forests are able to regrow and continue to clean our air and purify our water.

As we transport our products from our manufacturers to their next destination, we're also prioritizing less carbon-intensive shipping modes than air transport, such as rail and ocean. We will ship 50 percent or more of the total weight of all carbon neutral watches and bands using non-air modes, like ocean freight, over the lifetime of the product.

100%

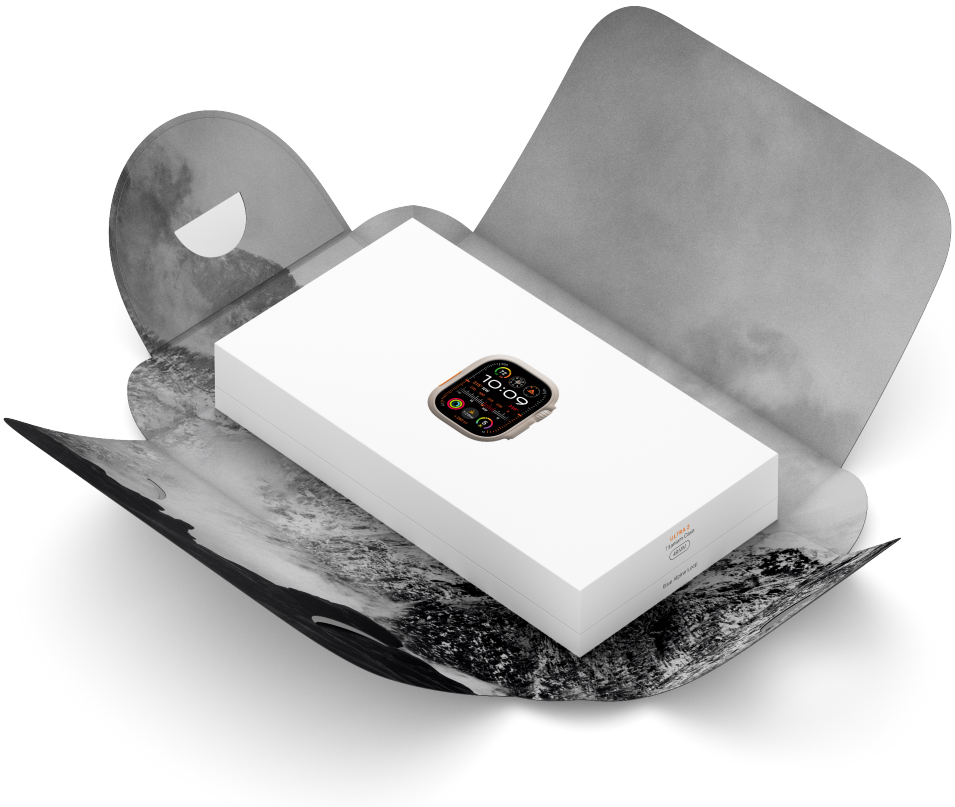
of the packaging[20] is fiber-based, as part of our commitment to remove plastic in packaging by 2025

38%

recycled content in fiber packaging

100%

of the new wood fiber in the packaging comes from responsibly managed forests[21]



Use

Apple Watch Ultra 2 meets California's stringent requirements for energy efficiency.[22]

We design our products to be energy efficient, long-lasting, and safe. Apple Watch Ultra 2 uses software and power-efficient components that intelligently manage power consumption. We also run our own Reliability and Environmental Testing Labs, where our products go through rigorous testing before they leave our doors. Our support continues throughout each product's life cycle, with regular software updates to keep devices current and a network of authorized repair professionals to service them, if necessary.

To address emissions tied to the electricity our products use, we are building clean energy projects and engaging with our customers to educate and provide opportunities to support the decarbonization of the grid.

Designed to last

Apple Watch Ultra 2 is made with durable materials, certified to water resistance 100 meters under ISO 22810:2010,[5] is tested to the relevant aspects of MIL-STD 810H,[6] and is rated IP6X dust resistant.

Made with smarter chemistry

We apply rigorous controls for materials users touch—all based on recommendations from toxicologists and dermatologists.

Recover

Return your product with Apple Trade In, and we'll ensure it has a long life or recycle it for free.

When products are used longer, fewer resources are extracted from the earth. And we want the materials in our products to live on in other products. That's why we launched Apple Trade In—it offers customers a seamless way to return their old devices and accessories to Apple. Eligible devices can be traded in for credit or an Apple Store Gift Card, while accessories and other devices can be recycled for free.[23] We also offer and participate in product take-back and recycling collection programs for 99 percent of the countries where we sell products—and we hold our recyclers to high standards. Our efforts to keep harmful substances out of our products mean our materials are safer to recover and reuse.

We're also creating Apple Recycler Guides to provide guidance for professional electronics recyclers on how to safely disassemble Apple products to maximize recovery of resources. The guides provide valuable insight into the steps for recycling, as well as the recommended downstream material recycler for the disassembled parts.

Apple Trade In

For more information on how to recycle your products at end of life, visit:

apple.com/trade-in

Definitions

Bio-based plastics: Bio-based plastics are made from biological sources rather than from fossil-fuel sources. Bio-based plastics allow us to reduce reliance on fossil fuels.

Carbon footprint: Estimated emissions are calculated in accordance with guidelines and requirements as specified by ISO 14040, ISO 14044, and ISO 14067. There is inherent uncertainty in modeling carbon emissions due primarily to data limitations. For the top component contributors to Apple's carbon emissions, Apple addresses this uncertainty by developing detailed process-based environmental models with Apple-specific parameters. For the remaining elements of Apple's carbon footprint, we rely on industry average data and assumptions. We calculate carbon emissions using the 100-year time horizon global warming potentials (GWP100) from the IPCC Sixth Assessment Report (AR6), including biogenic carbon. Our carbon footprint calculation includes emissions for the following life cycle phases in CO_2 equivalency (CO_2e):

- **Production:** Includes the extraction, production, and transportation of raw materials, as well as the manufacture, transport, and assembly of all parts and product packaging.
- **Transport:** Includes ground, air, and sea transportation of the finished product and its associated packaging from manufacturing site directly to customers or regional distribution hubs. Regional transport is modeled using average distances.
- **Use:** Apple assumes a three-year period for power use by first owners for iOS, iPadOS, and watchOS devices and a four-year period for macOS and tvOS devices. Product use scenarios are based on historical customer use data for similar products. Energy use is simulated in various ways; for example, by modeling daily battery drain or through performing activities like movie and music playback. Geographic differences in the power grid mix have been accounted for at a regional level.
- **End-of-life processing:** Includes transportation from collection hubs to recycling centers and the energy used in mechanical separation and shredding of parts.

  For more information on our product carbon footprint methodology, visit apple.com/environment/answers.

Carbon neutral: Refers to the state where the gross carbon footprint is offset through the retirement of an equivalent quantity of carbon credits to bring the net carbon footprint to zero. For an Apple product to be carbon neutral, we require the gross footprint to have been substantially reduced first before carbon credits are applied, through the use of low-carbon design and recycled and renewable materials, matching all electricity impacts with clean electricity, and prioritizing low-carbon modes of transportation.

Clean electricity: Refers to both renewable electricity as well as other projects that Apple considers "low carbon" but not "renewable," like nuclear and large-impact hydroelectricity projects, which may be included as a result of low-carbon electricity provided by the grid.

Low-carbon materials: Refers to materials created using production techniques with reduced carbon impact, such as Elysis (a patented technology that eliminates direct greenhouse gas emissions from the traditional aluminum smelting process) or aluminum smelted using hydroelectricity instead of coal.

Recycled materials: Recycling makes better use of finite resources by sourcing from recovered rather than mined materials. Recycled content claims for materials used in our products have been verified by an independent third party to a recycled content standard that conforms to ISO 14021.

Renewable materials: We define bio-materials as those that can be regenerated in a human lifespan, like paper fibers or sugarcane. Bio-materials can help us use fewer finite resources. But even though bio-materials have the ability to regrow, they are not always managed responsibly. Renewable materials are a type of bio-material managed in a way that enables continuous production without depleting the earth's resources. That's why we focus on sources that are certified for their management practices.

Supplier Clean Energy Program: Since the electricity used to make our products is the largest contributor to our overall carbon footprint, we're helping our suppliers decarbonize their Apple production, including by transitioning electricity use to 100 percent clean sources.

Carbon footprint

Greenhouse gas emissions were calculated using a life cycle assessment (LCA) methodology in accordance with ISO 14040, 14044, and 14067 standards and based on Apple Watch Ultra 2 paired with Alpine Loop. The LCA boundary for this product includes the physical product and all of its components, as well as all in-box accessories.

Greenhouse gas emissions	Apple Watch Ultra 2 with Alpine Loop
Apple emissions from utility-purchased electricity (scope 2)	0 kg CO_2e
Life cycle product emissions (scope 3)	12 kg CO_2e
• Production	80%
• *Generation of renewable electricity - production*	*11%*
• Transportation	16%
• Product use	2%
• *Generation of renewable electricity - product use*	*2%*
• End-of-life processing	2%
GHG reductions achieved[9]	↓81%
Product footprint before carbon credits	**12 kg CO_2e**
Carbon credits applied (per product)	12 kg CO_2e
Total product footprint after carbon credits	**0 kg CO_2e**

Note: Percentages may not total 100 due to rounding.

We've also calculated the product carbon footprint for different configurations:

Configuration	Apple Watch Ultra 2 with Trail Loop
Apple Watch Ultra 2 paired with Trail Loop	11.1 kg CO_2e
Carbon credits applied (per product)	11.1 kg CO_2e
Total product footprint after carbon credits	**0 kg CO_2e**

There is inherent uncertainty in modeling carbon emissions due primarily to data limitations. For the top component contributors to Apple's carbon emissions, Apple addresses this uncertainty by developing detailed process-based environmental models with Apple-specific parameters. For the remaining elements of Apple's carbon footprint, we rely on industry-average data and assumptions.

For more information on our product carbon footprint methodology, visit apple.com/environment/answers.

High Quality Carbon Removal and Offsets

We plan to reach our goal of becoming carbon neutral across our entire value chain by 2030, using a wide range of solutions, prioritizing significant emissions avoidance and reductions as well as long-term carbon removal initiatives like the Restore Fund.

In 2021, we partnered with Conservation International and Goldman Sachs to create the Restore Fund, investing up to $200 million in nature-based projects—like forests, wetlands, and grasslands, that restore critical ecosystems, support local communities, and also generate a financial return. This fund is unique because it aims to change carbon removal from a cost to a profitable investment. By creating a fund that generates both a financial return as well as real and measurable carbon impact, we aim to drive broader change in the future—encouraging capital investment in carbon removal around the globe.

The first phase of our innovative fund has focused on blending responsible forestry practices with carbon removal. We're working with forestry managers to create sustainably managed forests that are optimized for both carbon and wood production in order to create revenue from timber and generate high-quality carbon credits. The projects also seek to maximize positive environmental impact, including carbon, hydrology, and habitat restoration. In October 2022, Apple announced three new projects through the Restore Fund. Apple has invested with three high-quality forestry managers in Brazil and Paraguay with the goal of restoring 150,000 acres of certified sustainable working forests and protecting around 100,000 acres of native forests, grasslands, and wetlands. Together, these initial forestry projects are forecast to remove one million metric tons of carbon dioxide from the atmosphere starting in 2025.

As the projects in the Restore Fund come online, we're also working to address difficult-to-avoid emissions in the short term. We're intentional about identifying avoided deforestation and removal projects that are of the highest standard and that achieve meaningful impact. We often originate our own projects working with a reputable partner, like Conservation International, or we carefully select projects from third-party certified registries. Apple uses credits from projects that align with international standards such as Verra, the Climate, Community & Biodiversity (CCB) Standard, and the Forest Stewardship Council (FSC). These standards ensure that the projects generating credits are real, additional, measurable, quantified, and have systems in place to avoid double-counting and ensure permanence.

Carbon credits applied are retired after the end of each fiscal year, to correspond to the remaining emissions from the total number of products sold in the prior fiscal year. Apple uses an independent third party to confirm that the correct number of credits has been retired.

The high-quality carbon credit projects used to compensate the remaining emissions may include the following:

Project name	Project description	Accounting methodology used	Registry link
Forestal Apepu Carbon Project	Forestal Apepu S.A. is a company established in 2019 by an international forestry fund to conduct sustainable reforestation in Eastern Paraguay. The aim of the company is the sequestration of carbon and the production of quality timber in a highly deforested landscape. Forestal Apepu purchased two contiguous properties of 2,658 ha in the Department of San Pedro. As most private properties in the region, the land was deforested decades ago and then used for agriculture and beef production. Currently, the property maintains around 20% of its area with natural forest cover, albeit heavily degraded due to the informal extraction of biomass and other forest resources. Through fast-growing eucalypt plantations, trials of plantations with native species, and the strict protection of the remaining natural forest, Forestal Apepu aims at restoring forest cover. A target production area of 1,850 ha of forest plantations is planned to be established until 2021, of which 1,126 ha were already planted in 2019 and 2020 (first instance). The company may expand even further in the future, upon identification of potential expansion areas in the region.	AR-ACM0003 Afforestation and reforestation of lands except wetlands	https://registry.verra.org/app/projectDetail/VCS/2369

Endnotes

[1] Product recycled or renewable content is the mass of certified recycled material relative to the overall mass of the device, not including packaging or in-box accessories. This statement applies only to Apple Watch Ultra 2 paired with Alpine or Trail Loop.

[2] Our manufacturing electricity is sourced from clean electricity, including a mix of supplier and Apple clean energy projects.

[3] 50 percent of carbon neutral products by weight are planned, as of product launch, to be shipped via non-air modes of transportation over the lifetime of the products.

[4] Apple's Regulated Substances Specification describes Apple's restrictions on the use of certain chemical substances in materials in Apple products, accessories, manufacturing processes, and packaging used for shipping products to Apple's end customers. Restrictions are derived from international laws or directives, regulatory agencies, eco-label requirements, environmental standards, and Apple policies. Every Apple product is free of PVC and phthalates except for AC power cords in India, Thailand (for 2-prong AC power cords), and South Korea, where we continue to seek government approval for our PVC and phthalates replacement. Apple products comply with the European Union Directive 2011/65/EU and its amendments, including exemptions for the use of lead such as high-temperature solder. Apple is working to phase out the use of these exempted substances for new products where technically possible.

[5] Apple Watch Ultra 2 has a water resistance rating of 100 meters under ISO standard 22810:2010 and certified to EN13319. This means that it may be used for shallow-water activities like swimming in a pool or ocean, in addition to high-speed water sports like kitesurfing and wakeboarding, as well as recreational scuba diving to 40 meters.

[6] MIL-STD 810H is a certification for military equipment. Tested categories include: Altitude, High Temperature, Low Temperature, Temperature Shock, Immersion, Freeze/Thaw, Shock, Vibration.

[7] Based on retail packaging as shipped by Apple. Breakdown of U.S. retail packaging by weight. Adhesives, inks, and coatings are excluded from our calculations of plastic content and packaging weight.

[8] Apple is matching 100 percent of expected electricity consumption only for aluminum Apple Watch Series 9, Apple Watch SE, and Apple Watch Ultra 2.

[9] Carbon reductions are calculated against a baseline scenario: 1) No use of clean electricity for manufacturing or product use, beyond what is already available on the grid (based on regional emissions factors). 2) Apple's carbon intensity of key materials as of 2015 (our baseline year for our 2030 product carbon neutrality goal). Carbon intensity of materials reflects use of recycled content and production technology. 3) Apple's average mix of transportation modes (air, rail, ocean, ground) by product line across three years (fiscal years 2017 to 2019) to best capture the baseline transportation emissions of our products.

[10] We calculate emissions savings from the use of recycled or low-carbon materials in our products by comparing the carbon intensity of key materials today with their 2015 baseline for Apple products. We currently only quantify the carbon savings from the use of recycled aluminum, titanium, and stainless steel in the enclosure, which means the actual emissions avoided are likely larger. We plan to improve our accounting of recycled content over time.

[11] Greenhouse gas emissions were calculated using a life cycle assessment methodology in accordance with ISO 14040, 14044, and 14067 standards and based on Apple Watch Ultra 2 paired with Alpine Loop. The life cycle assessment boundary for this product includes the physical product and all of its components and packaging, as well as all in-box accessories.

[12] Apple uses credits from projects that align with international standards such as Verra, the Climate, Community & Biodiversity (CCB) Standard, and the Forest Stewardship Council (FSC). These standards ensure that the projects generating credits are real, additional, measurable, quantified, and have measures in place to avoid double-counting and ensure permanence.

[13] We map materials in our supply chain and publish a list of identified tin, tantalum, tungsten, gold (3TG), cobalt, and lithium smelters and refiners in our supply chain. Third-party assessments seek to confirm sourcing practices and are part of our responsible sourcing program. In addition, our efforts consider a broad range of risks, including social, environmental, human rights, and governance risks.

[14] Applies to Apple Watch Ultra 2 paired with Trail Loop or Alpine Loop.

[15] Excludes trace amount of tungsten found outside of the Taptic Engine and accounting for less than 0.1 percent of the total found in the device.

[16] All cobalt claims are on a mass balance allocation.

Endnotes

[17] Chemicals that meet GreenScreen® benchmark 3 or 4 or other equivalent methodologies like U.S. EPA Safer Choice are considered safer and preferred for use. GreenScreen® is a comprehensive hazard assessment tool that evaluates substances against 18 different criteria. For more information, visit www.greenscreenchemicals.org.

[18] All established final assembly supplier sites—those that have been Apple suppliers for more than one year—for Apple Watch Ultra 2 are third-party verified as Zero Waste by UL LLC (UL 2799 Standard). UL requires at least 90 percent diversion through methods other than waste to energy to achieve Zero Waste to Landfill (Silver 90–94 percent, Gold 95–99 percent, and Platinum 100 percent) designations.

[19] For more information about our work to protect and create responsibly managed forests, please read our Environmental Progress Report.

[20] Breakdown of U.S. retail packaging by weight. Adhesives, inks, and coatings are excluded from our calculations of plastic content and packaging weight.

[21] Responsible sourcing of wood fiber is defined in Apple's Responsible Fiber Specification. We consider wood fibers to include bamboo.

[22] Apple Watch Ultra 2 meets California Energy Commission's Energy Efficiency Standards for Small Battery Charger Systems as outlined in the California Code of Regulations. Please note that ENERGY STAR does not certify devices like Apple Watch.

Energy efficiency terms: The energy efficiency values for the Apple USB Power Adapter are based on the following conditions.

- Power adapter, no-load: Condition in which the Apple 20W USB-C Power Adapter with the Apple Watch Magnetic Charging Cable (1m) is connected to AC power, but not connected to Apple Watch Ultra 2.
- Power adapter efficiency: Average of the Apple 20W USB-C Power Adapter with the Apple Watch Magnetic Charging Cable (1m) measured efficiency when tested at 100 percent, 75 percent, 50 percent, and 25 percent of the power adapter's rated output current.

	Power consumption for Apple Watch Ultra 2		
Mode	100V	115V	230V
Power adapter, no load	0.22W	0.22W	0.24W
Power adapter efficiency	86.8%	87.9%	87.8%

[23] Trade-in values vary based on the condition, year, and configuration of your trade-in device, and may also vary between online and in-store trade-in. You must be at least 18 years old. In-store trade-in requires presentation of a valid, government-issued photo ID (local law may require saving this information). Additional terms from Apple or Apple's trade-in partners may apply.

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***SCS Global Services** does hereby certify that an independent assessment has been conducted for:*

Apple Inc.

1 Apple Park Way, Cupertino, CA 95014

Apple Watch Ultra 2 with Alpine Loop

Certification Scope:
Validation of Apple Inc.'s 2023 declaration of commitment to Carbon Neutral Certification based on the Cradle-to-Grave Greenhouse Gas emission for its product consisting of Apple Watch Ultra 2 with Alpine Loop.

Certification Criteria:

- SCS -108 Certification Standard for Carbon Neutral Entities, Buildings, Products and Services: Version 1.0.
- ISO 14067:2018 Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification

TOTAL ESTIMATED EMISSIONS VERIFIED: 12.0 KGS OF CO_2e PER UNIT
TOTAL ESTIMATED EMISSIONS TO OFFSET: 12.0 KGS OF CO_2e PER UNIT

Carbon Neutral Certification, based on the declaration of commitment made by Apple Inc. for its product consisting of Apple Watch Ultra 2 with Alpine Loop, in accordance with the SCS-108 Carbon Neutral Standard for the period of September 12, 2023 through September 11, 2024.

Certificate # SCS-CN-00110

CARBON NEUTRAL CERTIFIED BY SCS GLOBAL SERVICES

SCSglobal SERVICES

Stanley Mathuram, PE, Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

***SCS Global Services** does hereby certify that an independent assessment has been conducted for:*

Apple Inc.

1 Apple Park Way, Cupertino, CA 95014

Apple Watch Ultra 2 with Trail Loop

Certification Scope:
Validation of Apple Inc.'s 2023 declaration of commitment to Carbon Neutral Certification based on the Cradle-to-Grave Greenhouse Gas emission for its product consisting of Apple Watch Ultra 2 with Trail Loop.

Certification Criteria:

- SCS -108 Certification Standard for Carbon Neutral Entities, Buildings, Products and Services: Version 1.0.
- ISO 14067:2018 Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification

TOTAL ESTIMATED EMISSIONS VERIFIED: 11.1 KGS OF CO_2e PER UNIT
TOTAL ESTIMATED EMISSIONS TO OFFSET: 11.1 KGS OF CO_2e PER UNIT

Carbon Neutral Certification, based on the declaration of commitment made by Apple Inc. for its product consisting of Apple Watch Ultra 2 with Trail Loop, in accordance with the SCS-108 Carbon Neutral Standard for the period of September 12, 2023 through September 11, 2024.

Certificate # SCS-CN-00113

Stanley Mathuram, PE, Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA